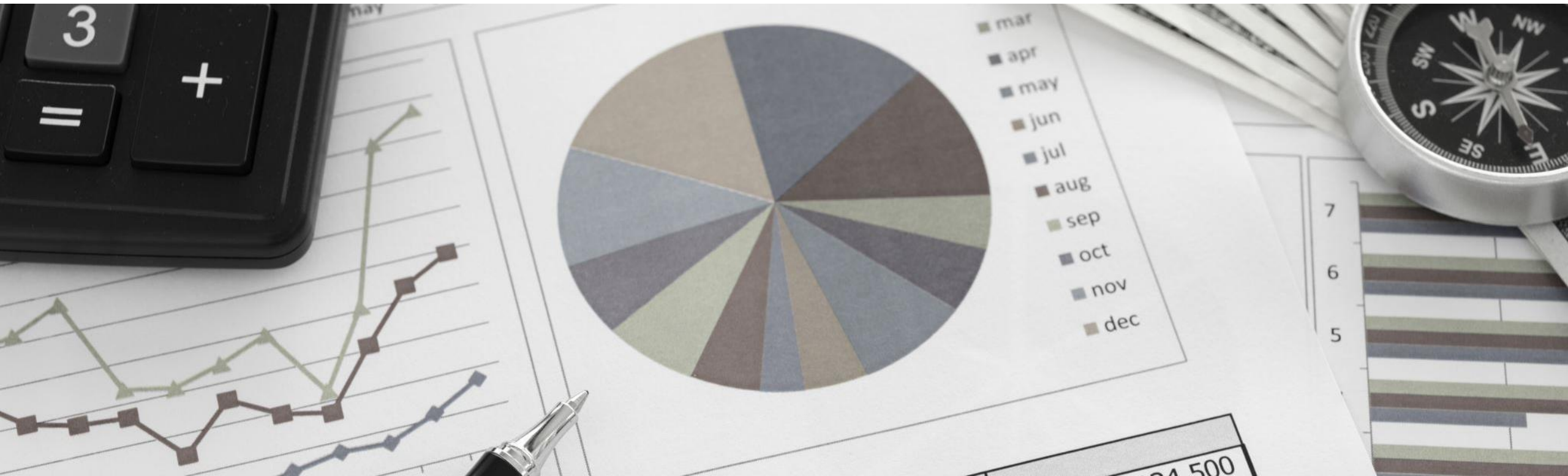# Nigeria Forex Exchange Analysis

- Comprehensive Analysis and Key Insights
- July 05, 2024
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Introduction

- Objectives

- Analyse recent trends in NGN exchange rates against USD, EUR, GBP.

- Evaluate the performance and unpredictability of these currency pairs.

- Understand the impact of key indicators on exchange rate.

- Provide actionable insights for risk management and strategies planning.

- Scope

- Analysis covers the past six months

Data Collection and Methodology
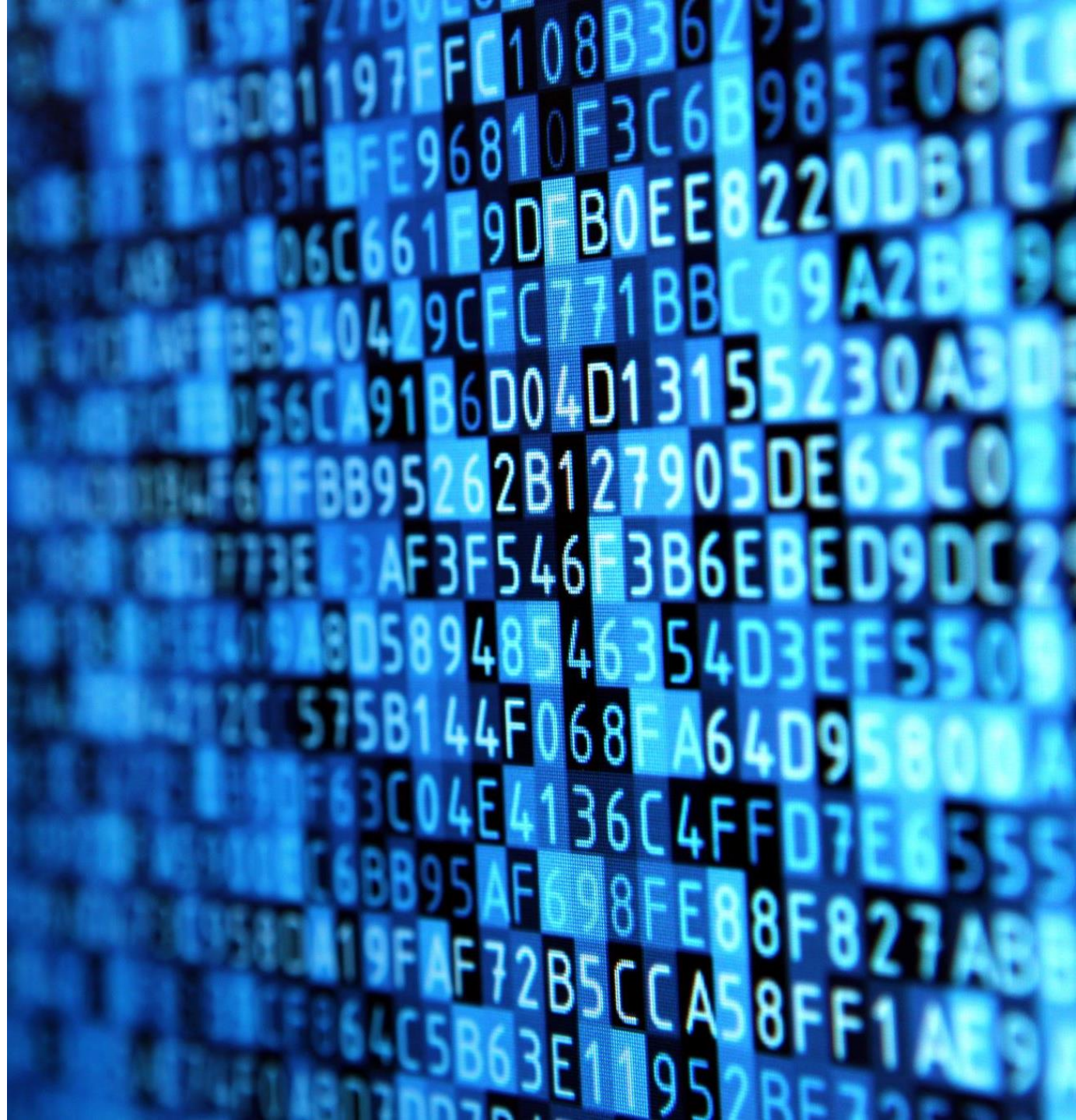
- **Data Sources**

Forex Data: Alpha Vantage API
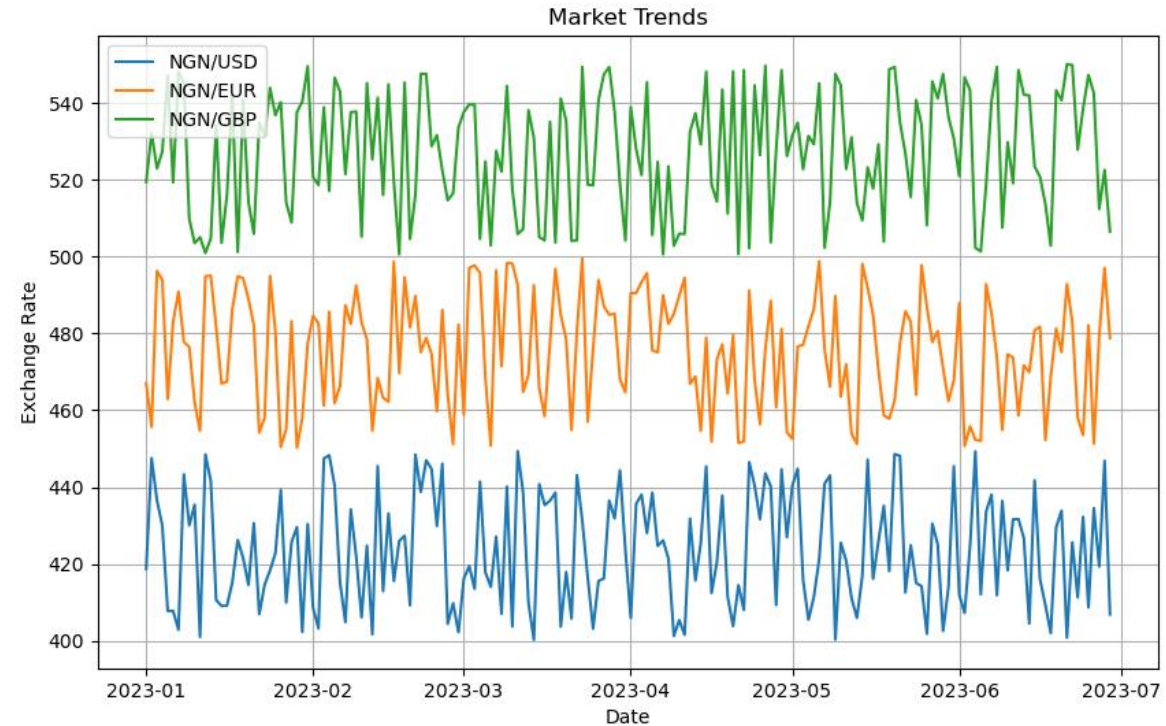
Economic Indicators: Mock data

Methodology

- Data Extraction: Data was fetched using the Alpha Vantage API.

- Data Transformation: Data was processed and cleaned using Pandas.

- Data Visualization: Insights were visualized using Matplotlib.

Market Trends

The line chart shows the exchange rate trends for NGN/USD, NGN/EUR, and NGN/GBP over the past six months. The x-axis represents the dates, while the y-axis shows the exchange rates.
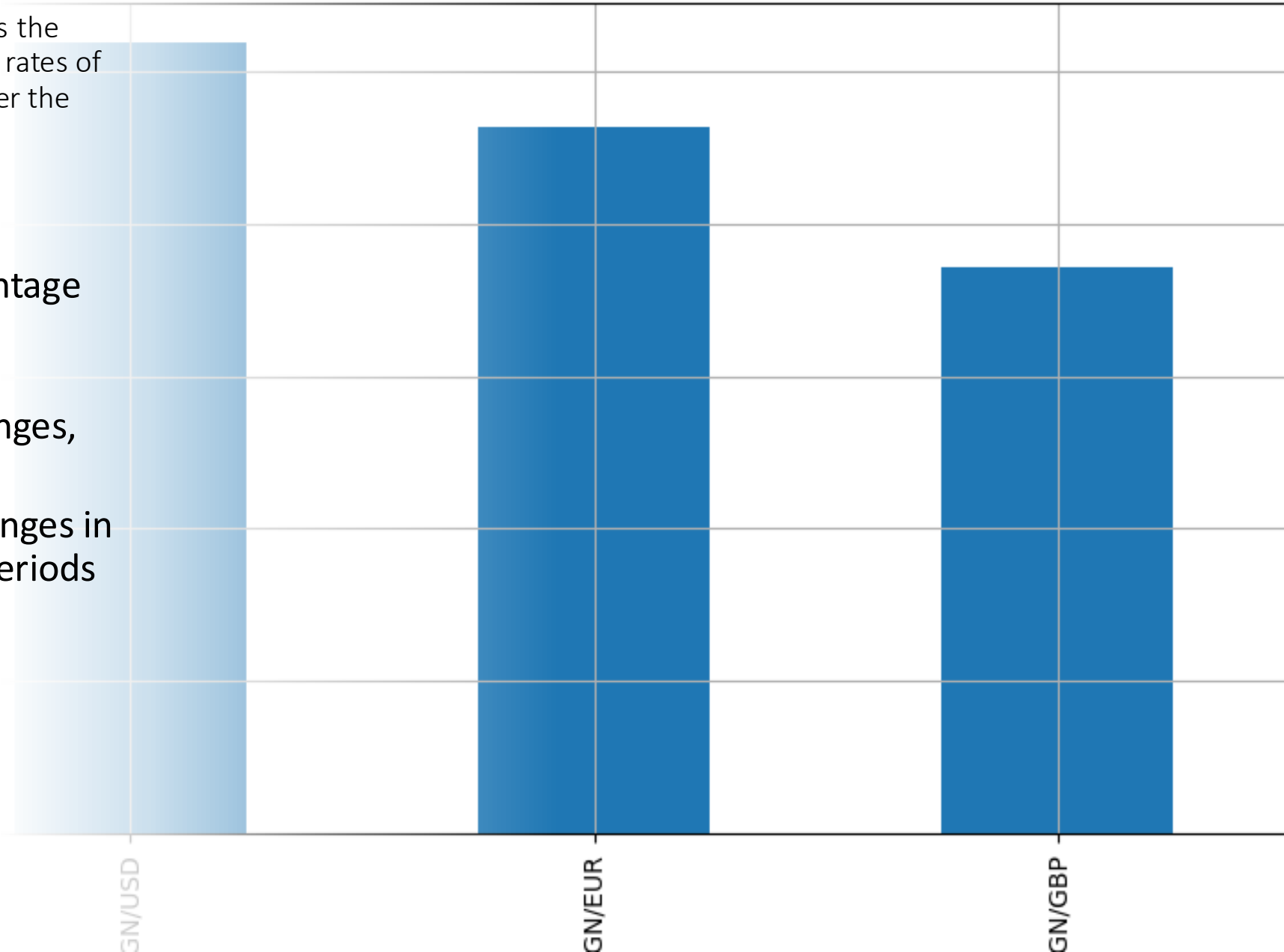

- **NGN/USD**: Displays the trend of Nigerian Naira against the US Dollar, indicating whether the Naira is appreciating or depreciating over time.
- **NGN/EUR**: Shows the trend against the Euro, helping to understand its stability or volatility.
- **NGN/GBP**: Illustrates the trend against the British Pound, providing insights into the performance against another major currency.
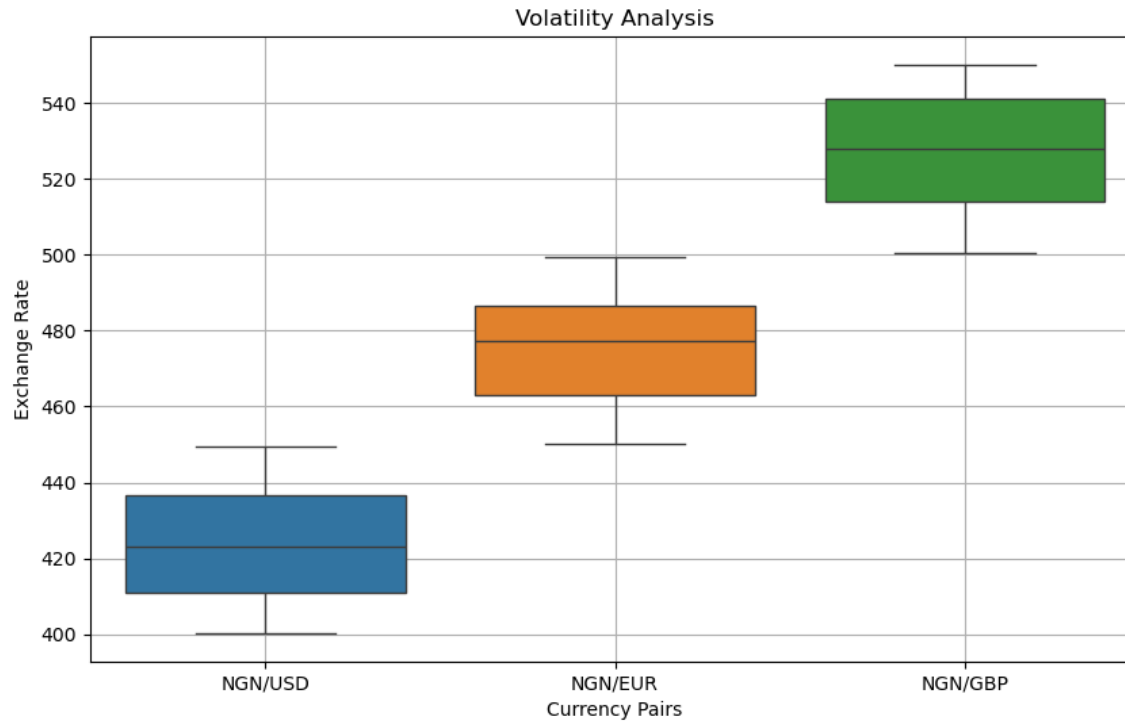
Performance Analysis

Performance Analysis
Description: The bar chart compares the percentage change in the exchange rates of NGN against USD, EUR, and GBP over the analyzed period.

- **NGN/USD**: Highest percentage increase, indicating strong performance.

- **NGN/EUR**: Moderate changes, suggesting relative stability.

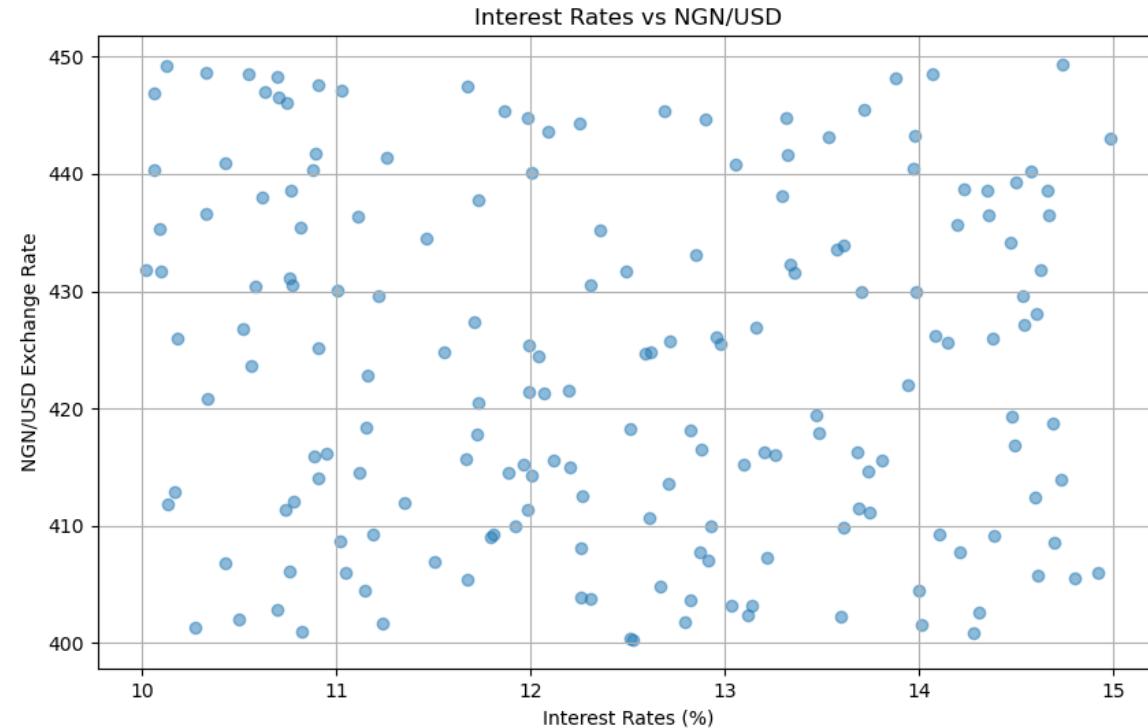- **NGN/GBP**: Shows the changes in performance, highlighting periods of volatility

Volatility Analysis

Description: The box plot visualizes the volatility of NGN exchange rates against USD, EUR, and GBP. The box plot shows the spread and variability of the exchange rates.

- **NGN/USD**: Exhibits the highest volatility, indicating potential risks.
- **NGN/EUR**: Shows low volatility, suggesting stability.
- **NGN/GBP**: Moderate volatility, highlighting medium risk.

Economic Indicators Impact

Description: The scatter plot demonstrates the relationship between interest rates and the NGN/USD exchange rate.

- **Correlation**: There is a visible correlation between interest rate changes and the exchange rate, which can help in predicting currency movements based on economic policies.

Thank you!

Question time